All India Council for Technical Education (AICTE)
ATAL Academy Sponsored

ONE WEEK

Faculty Development Program

on

"Power Electronic Systems and its Real Time Control Implementation in DSP"

8th – 12th November 2021

Coordinator

Dr. Mini Rajeev
Associate Professor
Electrical Engineering Department

Organized By
Department of Electrical Engineering
Agnel charities' Fr. C. Rodrigues Institute of Technology, Vashi

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REGISTRATION FEE/ SESSIONS

- There is no registration fee for the course.
- For certificate, attendance and passing of examination is mandatory.
- Three sessions will be conducted per day

RESOURCE PERSONS

The program will be conducted by eminent speakers from industry and academia.

WHO SHOULD ATTEND THE COURSE

- This course is useful for engineers and aspirants who are curious to know about power electronic systems and the implementation of converter control using DSP.
- The course will be most beneficial for:

➢ Research Scholars & Engineering post-graduates
➢ Professionals in industry
➢ Faculty members from academic and research institutions

ORGANIZING COMMITTEE

Dr. S. M. Khot	Principal
Dr. Bindu S.	HOD & Dean (Student Affairs)
Dr. Mini Rajeev	Course Coordinator
Mrs.Mini Namboothiripad	Course Co-Coordinator
Mr. Abhishek S.	Course Co-Coordinator

CONTACT FOR MORE INFORMATION

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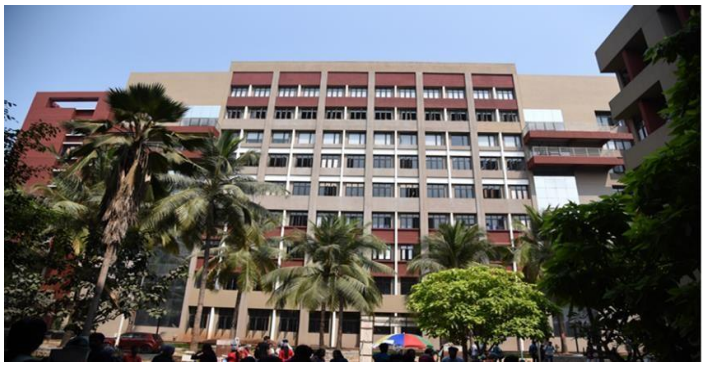
ABOUT THE INSTITUTE



F.C.R.I.T. was established in 1994 and is a part of the Agnel Technical Education Complex at Vashi, which itself was established in 1984. The institute is named after late Rev. Fr. Conceicao Rodrigues. F.C.R.I.T. has, within a short span of time, established itself as a leading engineering college in Mumbai University. Though its reputation rests mainly on the high quality, value-based technical education that it imparts, it has to its credit a verdant, well-maintained Campus and extensive facilities. Its location in the vicinity of the holy places of various religious denominations underscores its secular credentials and its philosophy of "Vasudhaiva Kuttumbakam".

The College has been granted Religious minority status. The college prides on being one of few that has accreditation for all five branches vide file no. 28-41/2010-NBA dated 18.12.2018. College is also accredited by NAAC in February 2021.

ELECTRICAL ENGINEERING DEPARTMENT

Department of Electrical Engineering (NBA accredited) offers UG course in Electrical Engineering (B.E), PG course in Power Electronics and Drives (M.E) and Ph.D. program to promote research activities in various fields of Electrical Engineering. The department has well-qualified faculty involved in teaching and research activities aiming brilliance in various fields of Electrical Engineering. Over the years, the department has progressed at rapid pace with well-equipped laboratories and other infrastructure facilities. Product development and Consultancy services are also rendered by the department. The department regularly conducts seminars, project contests and short-term courses in different areas of Electrical Engineering.

OBJECTIVES OF AICTE ATAL ACADEMY

- To set up an Academy which will plan and help in imparting quality technical education in the country
- To support technical institutions in fostering research & innovation and entrepreneurship through training
- To stress upon empowering technical teachers & technicians using Information & Communication Technology
- To utilize SWAYAM platform and other resource for the delivery of trainings
- To provide a variety of opportunities for training and exchange of experiences such as workshops, Orientations, learning communities, peer mentoring and other faculty development programs.
- To support policy makers for incorporating training as per requirements

REGISTRATION PROCESS

- One can register for the course as per the specified process of AICTE Training and Learning (ATAL) Academy.
- Participants interested to attend this program should register online in the below mentioned link :

https://atalacademy.aicte-india.org/login

Information / Instructions for participants

- The FDP will be conducted in on line mode.
- Participants willing to participate in this online FDP should have the provision of laptop/desktop/smart phone with good quality internet connections and other audiovisual facilities, as required for online training.
- Seats are limited (only 200) and the participants are selected by organizers on first come first serve basis.
- On completion of the course an objective/quiz based assessment of all participants will be done.
- Those who have an attendance of minimum 80% and score more than 60% in the test will be issued a digital certificate by the ATAL Academy.

ABOUT THE COURSE

The main objective of the Short Term Training Program on "Power Electronic Systems and its Real Time Control Implementation in DSP" is to provide basic knowledge needed for implementing small scale Power Electronic systems using Digital Signal Processor (DSP). Power Electronics plays significant role in achieving energy efficiency and sustainable environment. This program will provide an opportunity to all the participants to understand the theory and horn their skills in the design and real time implementation of power electronic systems using DSP. Besides this, software tools for the design of power electronic systems, interfacing and electromagnetic interference issues will also be covered. This will be done through theoretical sessions, demonstrations of laboratory-based sessions and case studies of various applications of power electronic systems.

COURSE OBJECTIVES

The course will focus on introduction to various power electronic systems, software tools for the design & implementation of control methods using DSP. The program will also include case studies and will discuss practical aspects needed for the implementation of control of power electronic systems in DSP.

CONTENTS

- Power Electronic Systems
- Control of Power Electronic Converter(PEC)
- Design of Power Electronic Systems
- Software Tools for design of PEC
- Basics of Digital Signal Processor (DSP)
- Programming of DSP
- Interface design-DSP & PEC
- Fabrication of PEC using DSP
- Thermal design of PEC
- EMI Issues of Power Electronic Systems
- Case Studies